CLAIMS

1. A pharmaceutical composition for preventing, treating, or prophylaxis of arthrosis, comprising a substance having an activity in modulating signal transduction mediated by AILIM, and a pharmaceutically acceptable carrier.

2. The pharmaceutical composition of claim 1, wherein the substance has an activity in inhibiting proliferation of AILIM-expressing cells or in inhibiting production of a cytokine by AILIM-expressing cells.

3. The pharmaceutical composition of claim 1 or 2, wherein the cytokine is interferon γ which is a cytokine produced by Th1 type T cells, or interleukin 4 which is a cytokine produced by Th2 type T cells.

4. The pharmaceutical composition of any one of claims 1 to 3, wherein the arthrosis is rheumatoid arthritis.

5. The pharmaceutical composition of any one of claims 1 to 3, wherein the arthrosis is osteoarthritis.

6. The pharmaceutical composition of any one of claims 1 to 5, wherein the substance is a protein substance.

7. The pharmaceutical composition of claim 6, wherein the protein substance is selected from the group consisting of:

a) an antibody which binds to AILIM or a portion thereof;

b) a polypeptide comprising the whole or a portion of an extracellular region of AILIM;

c) a fusion polypeptide comprising the whole or a portion of an extracellular region of AILIM and the whole or a portion of a constant region of immunoglobulin heavy chain; and

d) a polypeptide which binds to AILIM.

8. The pharmaceutical composition of any one of claims 1 to 5, wherein the substance is a non-protein substance.

9. The pharmaceutical composition of claim 8, wherein the non-protein substance is DNA, RNA, or a chemically synthesized compound.

10. A pharmaceutical composition for preventing, treating, or prophylaxis of inflammation, comprising a substance having an activity

in modulating signal transduction mediated by AILIM, and a pharmaceutically acceptable carrier.

11. The pharmaceutical composition of claim 10, wherein the substance has an activity in inhibiting proliferation of AILIM-expressing cells or in inhibiting production of a cytokine by AILIM-expressing cells.

12. The pharmaceutical composition of claim 11, wherein the cytokine is interferon γ which is a cytokine produced by Th1 type T cells, or interleukin 4 which is a cytokine produced by Th2 type T cells.

13. The pharmaceutical composition of any one of claims 10 to 12, wherein the inflammation is hepatitis.

14. The pharmaceutical composition of any one of claims 10 to 13, wherein the substance is a protein substance.

15. The pharmaceutical composition of claim 14, wherein the protein substance is selected from the group consisting of:

a) an antibody which binds to AILIM or a portion thereof;

b) a polypeptide comprising the whole or a portion of an extracellular region of AILIM;

c) a fusion polypeptide comprising the whole or a portion of an extracellular region of AILIM and the whole or a portion of a constant region of immunoglobulin heavy chain; and

d) a polypeptide which binds to AILIM.

16. The pharmaceutical composition of any one of claims 10 to 13, wherein the substance is a non-protein substance.

17. The pharmaceutical composition of claim 16, wherein the non-protein substance is DNA, RNA, or a chemically synthesized compound.

18. A pharmaceutical composition for preventing, treating, or prophylaxis of graft versus host reaction and immune rejection accompanying graft versus host reaction or transplantation of a tissue or organ, comprising a substance having an activity in modulating signal transduction mediated by AILIM, and a pharmaceutically acceptable carrier.

19. The pharmaceutical composition of claim 18, wherein the substance has an activity in inhibiting proliferation of

AILIM-expressing cells or inhibiting production of a cytokine by AILIM-expressing cells.

20. The pharmaceutical composition of claim 19, wherein the cytokine is interferon γ which is a cytokine produced by Th1 type T cells, or interleukin 4 which is a cytokine produced by Th2 type T cells.

21. The pharmaceutical composition of any one of claims 18 to 20, wherein the substance is a protein substance.

22. The pharmaceutical composition of claim 21, wherein the protein substance is selected from the group consisting of:

a) an antibody which binds to AILIM or a portion thereof;

b) a polypeptide comprising the whole or a portion of an extracellular region of AILIM;

c) a fusion polypeptide comprising the whole or a portion of an extracellular region of AILIM and the whole or a portion of a constant region in immunoglobulin heavy chain; and

d) a polypeptide which binds to AILIM.

23. The pharmaceutical composition of any one of claims 18 to 20, wherein the substance is a non-protein substance.

24. The pharmaceutical composition of claim 23, wherein the non-protein substance is DNA, RNA, or a chemically synthesized compound.

25. A pharmaceutical composition for preventing immune response triggered by a foreign antigen or an autoantigen, comprising a substance having an activity of controlling signal transduction mediated by AILIM, and a pharmaceutically acceptable carrier.

26. The pharmaceutical composition of claim 25, wherein the immune response is production of an antibody against the antigen, cell proliferation, or production of a cytokine.

27. The pharmaceutical composition of claim 25 or 26, wherein the substance has an activity in inhibiting proliferation of AILIM-expressing cells or in inhibiting production of a cytokine by AILIM-expressing cells.

28. The pharmaceutical composition of claim 27, wherein the cytokine is interferon γ which is a cytokine produced by Th1 type T cells, or interleukin 4 which is a cytokine produced by Th2 type T

cells.

29. The pharmaceutical composition of any one of claims 25 to 28, wherein the substance is a protein substance.

30. The pharmaceutical composition of claim 29, wherein the protein substance is selected from the group consisting of:

a) an antibody which binds to AILIM or a portion thereof;

b) a polypeptide comprising the whole or a portion of an extracellular region of AILIM;

c) a fusion polypeptide comprising the whole or a portion of an extracellular region of AILIM and the whole or a portion of a constant region of immunoglobulin heavy chain; and

d) a polypeptide which binds to AILIM.

31. The pharmaceutical composition of any one of claims 25 to 28, wherein the substance is a non-protein substance.

32. The pharmaceutical composition of claim 31, wherein the non-protein substance is DNA, RNA, or a chemically synthesized compound.